

C/015/025 Incoming

#4164

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September 4, 2012

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SEP 07 2012

DIV. OF OIL, GAS & MINING

Utah Division of Oil, Gas, and Mining Coal Program
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Subject: Permit Amendment Submittal Hydrology Monitoring Plan.
Deficiency List Task No. 4144
Castle Valley Mining LLC, C/015/0025

To whom it may concern,

Castle Valley Mining LLC located in Huntington, Utah would like to submit a revised hydrology monitoring amendment to permit number C/015/0025. This package includes notarized C1C2 forms, three copies of redline version of changes to the MRP as well as five final copies for insertion into the MRP for your review. Please review and provide us with your comments.

The attached proposed changes to the MRP reflect a change in the inactive monitoring locations. The following are the current locations: FC-2, 3, 4, 6, 7, 8, and SMH-5 are currently inactive on Chapter 7 table 7-14 of the MRP. Chapter 7 table 7-14 specifies activation of these locations when mining in the area sited. SBC-18, 20, 21, 22, and SCC-2 are specified activation within 500' of mining in the area. Castle Valley Mining will be mining in these areas soon or in the near future and propose activating them at this time.

Deficiency R645.301-731.224-

The Division will receive Timeline notification as well as weekly reports as specified in the MRP 7-14 & 7-50 when these areas will be undermined. The time line will be sent to the Division Hydrologist via e-mail.

P.O. Box 475 • Huntington, UT 84528
Phone (435) 687-5454 • Fax (435) 687-5037

Deficiency R645.301-731.224-

As suggested by the Division Castle Valley Mining would like to amend Chapter 7 7-60A of the MRP. Surface water site SBC-20 does not have a water right associated with it and the flow data does not show a consistent flow. The Division recommended that the weekly monitoring is not necessary and could be removed from the narrative text. Castle Valley Mining proposes this removal of text.

Deficiency R645.301-512.110-

Plates 5-1A, 5-1B, and 5-1C, the Blind seam, Hiawatha Seam and the Tank Seam maps in the MRP are current as of this point. They may change in the future and the Division will be notified and sent new copies of the plates. As per conversation with April Abate it was determined that these plates need not be submitted at this time.

In addition, attached proposed changes to the MRP reflect a change in the Surface water quality parameter list. Chapter 7 table 7-17 of the MRP does not include Dissolved Oxygen as part of the Laboratory measurements. Castle Valley Mining LLC was asked by the Division to add this analysis to their lab results and propose adding this at this time.

Any questions please feel free to contact me (435) 687 5454

Sincerely,

Jaren Jorgensen
Engineer Tech

APPLICATION FOR COAL PERMIT PROCESSING

Permit Change ☒ New Permit ☐ Renewal ☐ Exploration ☐ Bond Release ☐ Transfer ☐

Permittee: Castle Valley Mining LLC

Mine: Bear Canyon Mine

Permit Number: C/015/0025

Title: Water Monitoring Amendment

Description, Include reason for application and timing required to implement:

Activation of water monitoring locations

Instructions: If you answer yes to any of the first eight questions, this application may require Public Notice publication.

- | | |
|---|---|
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 1. Change in the size of the Permit Area? Acres: _____ Disturbed Area: _____ <input type="checkbox"/> increase <input type="checkbox"/> decrease. |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 2. Is the application submitted as a result of a Division Order? DO# _____ |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 4. Does the application include operations in hydrologic basins other than as currently approved? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 6. Does the application require or include public notice publication? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 7. Does the application require or include ownership, control, right-of-entry, or compliance information? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 9. Is the application submitted as a result of a Violation? NOV # _____ |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 10. Is the application submitted as a result of other laws or regulations or policies? |

Explain: _____

- | | |
|---|--|
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 11. Does the application affect the surface landowner or change the post mining land use? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2) |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 13. Does the application require or include collection and reporting of any baseline information? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 15. Does the application require or include soil removal, storage or placement? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 16. Does the application require or include vegetation monitoring, removal or revegetation activities? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 17. Does the application require or include construction, modification, or removal of surface facilities? |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 18. Does the application require or include water monitoring, sediment or drainage control measures? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 19. Does the application require or include certified designs, maps or calculation? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 20. Does the application require or include subsidence control or monitoring? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 21. Have reclamation costs for bonding been provided? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 23. Does the application affect permits issued by other agencies or permits issued to other entities? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 24. Does the application include confidential information and is it clearly marked and separated in the plan? |

Please attach three (3) review copies of the application. If the mine is on or adjacent to Forest Service land please submit four (4) copies, thank you. (These numbers include a copy for the Price Field Office)

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

<u>Jaren Jorgensen</u>	<u>Engineer Tech</u>	<u>9/5/2012</u>	<u>JAREN JORGENSEN</u>
Print Name	Position	Date	Signature (Right-click above choose certify then have notary sign below)

Subscribed and sworn to before me this 5 day of Sept., 2012

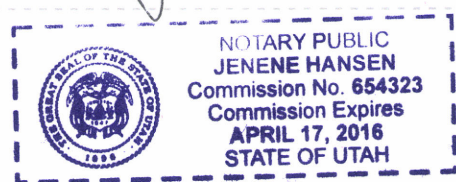
Notary Public: Jenene Hansen, state of Utah.

My commission Expires: 4-17-2016

Commission Number: 654323

Address: 51 N Main

City: Huntington State: UT Zip: 84528



For Office Use Only:

Assigned Tracking
Number:

Received by Oil, Gas & Mining

APPLICATION FOR COAL PERMIT PROCESSING
Detailed Schedule Of Changes to the Mining And Reclamation Plan

C/015/0025

Form DOGM - C2 (Revised December 10, 2007)

Table 7-14 Water Monitoring Matrix: Operational Phase of Mining

Location	Status	Jan	Feb	Mar	May	June	July	Aug ³	Sept	Oct	Nov	Dec
Streams												
BC-1 (Upper Bear Creek)	Active		oper		oper.			oper.		oper.		
BC-2 (Lower Bear Creek)	Active		oper		oper.			oper.		oper.		
BC-3 (Lower Rt Fork Bear Creek)	Active		oper		oper.			oper.		oper.		
BC-4 (Upper Rt Fork Bear Creek)	Active		oper		oper.			oper.		oper.		
CK-1 (Upper Cedar Creek)	Active		oper		oper.			oper.		oper.		
CK-2 (Lower Cedar Creek)	Active		oper		oper.			oper.		oper.		
MH-1 (Lower McCadden Hollow Creek)	Inactive - Initiate if mining in Lease U-46481 or U-024316				field ⁵			field		field		
MH-2 (Upper McCadden Hollow Creek)	Inactive - Initiate if mining in Lease U-46481 or U-024316				field ⁵			field		field		
FC-1 (Lower Left Fork Fish Creek) ⁷	Active				field ⁵			field		field		
FC-2 (Lower Right Fork Fish Creek) ⁷	Inactive; initiate when mining T16S, R8E, Secs 20 or 47				field ⁵			field		field		
FC-3 (Right Fork Fish Creek Property Line) ⁷	Inactive; initiate when mining T16S, R8E, Secs 17 or 18				field ⁵			field		field		
FC-4 (Upper Right Fork Fish Creek) ³	Inactive; initiate when mining T16S, R8E, Secs 7 or 18				field ⁵			field		field		
FC-5 (Mud Spring) ⁷	Inactive; initiate when mining T16S, R8E Sec 7				field ⁵			field		field		
FC-6 (Upper Left Fork Fish Creek) ⁷	Inactive; initiate when mining T16S, R8E, Secs 18, 19 or 20				field ⁵			field		field		
FC-7 (Water Right Upper Left Fork Fish Creek)	Inactive; initiate when mining T16S, R8E, Secs 18, 19 or 20				field ⁵			field		field		
FC-8 (Water Right Upper Left Fork Fish Creek)	Inactive; initiate when mining T16S, R8E, Secs 18, 19 or 20				field ⁵			field		field		
Springs												
SBC-4 (Big Bear Springs) ⁴	Active		oper		oper.			oper.		oper.		
SBC-5 (Birch Spring) ⁴	Active		oper		oper.			oper.		oper.		
SBC-9a (Hiawatha Seam)	Active		oper		oper.			oper.		oper.		
SBC-12 (16-7-13-1)	Inactive; initiate when mining begins in Mohrland				field ⁵			field		field		
SBC-14 (WHR-6)	Active				oper.			oper.		oper.		
SBC-15 (WHR-5)	Active				field ⁵			field		field		
SBC-16 (WHR-4) ^{6,7}	Active				field ⁵			field		field		
SBC16A ⁷	Active				field ⁵			field		field		
SBC-16B ⁷	Active				field ⁵			field		field		
SBC-17 (16-7-24-4)	Active		oper		oper.			oper.		oper.		
SBC-18 (WHR-2) ⁷	Inactive; initiate when active mining in Mine #4 or Mohrland area is within 500				field ⁵			field		field		
SBC-20 (16-8-18-4)	Inactive; initiate when active mining in Mine #4 or Mohrland area is within 500				field ⁵			field		field		
SBC-21 (16-8-18-1) ⁷	Inactive; initiate when active mining in Mine #4 or Mohrland area is within 500				field ⁵			field		field		
SBC-22 (Stockwater Trough)	Inactive; initiate when active mining in Mine #4 is within 500				field ⁵			field		field		
SCC-1 (16-8-20-1)	Inactive; initiate when active mining in Mine #4 or Mohrland area is within 500				field ⁵			field		field		
SCC-2 (16-8-18-5) ⁷	Inactive; initiate when active mining in Mine #4 or Mohrland area is within 500				field ⁵			field		field		
SCC-3 (Mohrland Portal)	Active				field ⁵			field		field		
SCC-5 (16-8-7-3)	Inactive; initiate when active mining in Mohrland area is within 500 feet				field ⁵			field		field		
SMH-1 (FBC-6)	Inactive - Initiate if mining in Lease U-46481 or U-024316				field ⁵			field		field		
SMH-2 (FBC-5)	Inactive - Initiate if mining in Lease U-46481 or U-024316				field ⁵			field		field		
SMH-3 (FBC-13)	Inactive - Initiate if mining in Lease U-46481 or U-024316				field ⁵			field		field		
SMH-4 (FBC-4)	Inactive - Initiate if mining in Lease U-46481 or U-024316				field ⁵			field		field		
SMH-5 (Stockwater Trough)	Inactive - Initiate if portal accessing U-61048 and U-61049 is opened				field ⁵			field		field		
Wells												
SBC-3 (Creek Well)	Active		oper		oper.			oper.		oper.		
SDH-2 (Well Sec. 11, T16S, R7E)	Inactive - Initiate if mining in Lease U-46481 or U-024316				level ⁵			level		level		
SDH-3 (Well Sec. 10, T16S, R7E)	Inactive - Initiate if mining in Lease U-46481 or U-024316				level ⁵			level		level		
MW-114 (Well Sec. 18, T16S, R8E)	Active				level ⁵			level		level		
MW-117 (Well Sec. 12, T16S, R8E)	Active				level ⁵			level		level		

- Notes:
1. See Tables 7-13 and 7-17 for listing of water quality monitoring parameters.
 2. oper. = operational base. = baseline
 3. Expanded List parameters taken in August of year 5 prior to each permit renewal.
 4. SBC-4 and SBC-5 shall also be tested for oil and grease
 5. First sample to be taken in May or June, when Gentry Mountain is accessible.
 6. A comment will be made regarding the level of the pond feeding the spring.
 7. Weekly monitoring to begin one month prior to mining in area and continue until one month after. Monthly monitoring will then be done for an additional six months.

Table 7-17 Surface Water Quality Parameter List

Field Measurements:

*	-	Water Levels or Flow
*	-	pH
*	-	Specific Conductivity (µmhos/cm)
*	-	Temperature (°C)

Laboratory Measurements: (mg/L) (Major, minor ions and trace elements are to be analyzed in dissolved form only)

	*	-	^	Dissolved Oxygen
#	*	-	^	Total Settleable Solids
#	*	-	^	Total Suspended Solids
	*	-	^	Total Dissolved Solids
		-	^	Total Hardness (as CaCO ₃)
		-		Aluminum (Al)
		-		Arsenic (As)
		-	^	Boron (B)
		-	^	Carbonate (CO ₃)
		-	^	Bicarbonate (HCO ₃)
		-		Cadmium (Cd)
		-	^	Calcium (Ca)
		-	^	Chloride (Cl)
		-		Copper (Cu)
	*	-	^	Iron (Fe) (Total and Dissolved)
		-		Lead (Pb)
		-	^	Magnesium (Mg)
	*	-	^	Manganese (Mn) (Total and Dissolved)
		-		Molybdenum (Mo)
		-		Nitrogen, Ammonia (NH ₃)
		-		Nitrite (NO ₂)
		-		Nitrate (NO ₃)
		-	^	Potassium (K)
		-		Phosphate (PO ₄)
		-	^	Selenium (Se)
		-	^	Sodium (Na)
		-	^	Specific Conductivity (µmhos/cm)
		-	^	Sulfate (SO ₄)
		-		Zinc (Zn)
#	*	-	^	Oil and Grease (if visible sheen)
		-	^	Cation-Anion Balance

Sampling Period:

- Baseline
- * Operation, Post-mining
- # Construction
- ^ Expanded List

Undermining of Perennial Streams. There are two areas where perennial streams will be undermined. They are the upper reaches of the right fork and left fork of Fish Creek.

The left fork is fed by one watershed and several springs. FC-7 and FC-6 are surface monitoring sites in this watershed, however flow has only been observed at these points during major storm events and spring run-off. Most of the year the streams are dry above the confluence of the major springs feeding it. These springs are SBC-18, SBC-20, and SBC-21, with SBC-21 being the largest. The confluence of these springs with the mainstream channel is inaccessible.

The right fork of Fish creek has two splits and is fed by three watersheds. The left split of the stream channel has base flow fed by SCC-5. This point also marks the start of the perennial section. The center split base flow is fed by SCC-2 which also marks the start of the perennial section for the center split. The right split is dry except during spring run-off or large storm events. However, during wet years water may flow from site FC-5 (Mudd Spring). Because of this FC-5 was selected as a start of the perennial section of the right split. Site FC-3 marks the property line between private and federal property, and FC-2 was selected to monitor off site impacts.

In these areas Castle Valley Mining will increase the monitoring of these sites to a weekly basis one month prior to mining in the area. This weekly monitoring will continue until one month after mining has left the area. Monitoring will then be reduced to once a month for an additional 6 months at which time it will resume its normal schedule. This increased monitoring will include the sites FC-2, FC-3, FC-4, FC-5, and SCC-2 for the right fork of Fish Creek, and FC-1, FC-6, SBC-16, SBC-16A, SBC-16B, SBC-18, **SBC-20**, and SBC-21 for the left fork of Fish Creek. The actual start time will be determined based on continual underground surveying that is required by MSHA. During the monitoring weekly reports will be sent to the division via email.

Table 7-14 Water Monitoring Matrix: Operational Phase of Mining

Location	Status	Jan	Feb	Mar	May	June	July	Aug ³	Sept	Oct	Nov	Dec
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CK-2 (Lower Cedar Creek)	Active		oper		oper.			oper.		oper.		
MH-1 (Lower McCadden Hollow Creek)	Inactive - Initiate if mining in Lease U 46481 or U-024316				field ⁵			field		field		
MH-2 (Upper McCadden Hollow Creek)	Inactive - Initiate if mining in Lease U 46481 or U-024316				field ⁵			field		field		
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FC-3 (Right Fork Fish Creek Property Line) ⁷	Active				field ⁵			field		field		
FC-4 (Upper Right Fork Fish Creek) ⁷	Active				field ⁵			field		field		
FC-5 (Mud Spring) ⁷	Inactive, initiate when mining T16S R8E Sec 7				field ⁵			field		field		
FC-6 (Upper Left Fork Fish Creek) ⁷	Active				field ⁵			field		field		
FC-7 (Water Right Upper Left Fork Fish Creek)	Active				field ⁵			field		field		
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SBC-4 (Big Bear Springs) ⁴	Active		oper		oper.			oper.		oper.		
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SBC-17 (16-7-24-4)	Active		oper		oper.			oper.		oper.		
SBC-18 (WHR-2) ⁷	Active Begin sampling within 500' In 4 Mine or Mohrland				field ⁵			field		field		
SBC-20 (16-8-18-4)	Active Begin sampling within 500' In 4 Mine or Mohrland				field ⁵			field		field		
SBC-21 (16-8-18-1) ⁷	Active Begin sampling within 500' In 4 Mine or Mohrland				field ⁵			field		field		
SBC-22 (Stockwater Trough)	Active Begin sampling within 500' In 4 Mine				field ⁵			field		field		
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SCC-2 (16-8-18-5) ⁷	Active Begin sampling within 500' In 4 Mine or Mohrland				field ⁵			field		field		
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SCC-5 (16-8-7-3)	Inactive, initiate when active mining in Mohrland area is within 500 feet				field ⁵			field		field		
SMH-1 (FBC-6)	Inactive - Initiate if mining in Lease U 46481 or U-024316				field ⁵			field		field		
SMH-2 (FBC-5)	Inactive - Initiate if mining in Lease U 46481 or U-024316				field ⁵			field		field		
SMH-3 (FBC-13)	Inactive - Initiate if mining in Lease U 46481 or U-024316				field ⁵			field		field		
SMH-4 (FBC-4)	Inactive - Initiate if mining in Lease U 46481 or U-024316				field ⁵			field		field		
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SDH-3 (Well Sec. 10, T16S, R7E)	Inactive - Initiate if mining in Lease U 46481 or U-024316				level ³			level		level		
MW-114 (Well Sec. 18, T16S, R8E)	Active				level ³			level		level		
MW-117 (Well Sec. 12, T16S, R8E)	Active				level ³			level		level		

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		-		Aluminum (Al)
		-		Arsenic (As)
		-	^	Boron (B)
		-	^	Carbonate (CO ₃)
		-	^	Bicarbonate (HCO ₃)
		-		Cadmium (Cd)
		-	^	Calcium (Ca)
		-	^	Chloride (Cl)
		-		Copper (Cu)
	*	-	^	Iron (Fe) (Total and Dissolved)
		-		Lead (Pb)
		-	^	Magnesium (Mg)
	*	-	^	Manganese (Mn) (Total and Dissolved)
		-		Molybdenum (Mo)
		-		Nitrogen, Ammonia (NH ₃)
		-		Nitrite (NO ₂)
		-		Nitrate (NO ₃)
		-	^	Potassium (K)
		-		Phosphate (PO ₄)
		-	^	Selenium (Se)
		-	^	Sodium (Na)
		-	^	Specific Conductivity (µmhos/cm)
		-	^	Sulfate (SO ₄)
		-		Zinc (Zn)
#	*	-	^	Oil and Grease (if visible sheen)
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